

Att'y Dkt. No.: US-1420

U.S. App. No: 09/897,988

IN THE CLAIMS:

Kindly rewrite Claims 1-10 as follows, in accordance with 37 C.F.R. § 1.121:

1. (currently amended) A method [[,]] comprising:

culturing a microorganism in a medium to produce and cause accumulation of a target substance in the medium; and

collecting the target substance,

wherein the microorganism is constructed from a parent strain ~~of the microorganism belonging to the genus Escherichia or Coryneform bacteria~~ and having a respiratory chain pathway of high energy efficiency and a respiratory chain pathway of low energy efficiency as respiratory chain pathways, and

the microorganism is a mutant strain or a genetic recombinant strain having either one or both of the following characteristics:

(A) the activity of an enzyme of the respiratory chain pathway of high energy efficiency selected from the group consisting of SoxM type oxidase, bc1 complex, cytochrome bo-type oxidase, and NDH-1 is enhanced,

(B) the activity of an enzyme of the respiratory chain pathway of low energy efficiency selected from the group consisting of cytochrome bd type oxidase and NDH-II is deficient,

wherein the target substance is selected from the group consisting of an L-amino acid and a nucleic acid.

2. (previously presented) The method according to Claim 1, wherein the activity of an enzyme of the respiratory chain pathway of high energy efficiency is enhanced by a method selected from the group consisting of

increasing a copy number of a gene coding for said enzyme; and

modifying an expression regulatory sequence of said gene.

3. (previously presented) The method according to Claim 1, wherein the activity of an enzyme of the respiratory chain pathway of low energy efficiency is made deficient by disruption of a gene coding for said enzyme.

4. (cancelled)

5. (cancelled)

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6. (previously presented) The method according to Claim 1, wherein said microorganism comprises enhanced SoxM type oxidase activity and deficient NDH-II activity.
7. (previously presented) The method according to Claim 1, wherein an enzyme of the respiratory chain pathway of high energy efficiency is cytochrome bo type oxidase.
8. (cancelled)
9. (cancelled)
10. (currently amended) The method according to Claim 81, wherein the microorganism is a bacterium belonging to the genus Escherichia.